UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,216	03/31/2004	Randolph L. Campbell	42P17827	6017

8791   7590   01/21/2010
BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

EXAMINER
ZHE, MENG YAO

ART UNIT	PAPER NUMBER
2195	

MAIL DATE	DELIVERY MODE
01/21/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _02 November 2009_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,2,4-11,13-20,22-29 and 31-36_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-2, 4-11, 13-20, 22-29, 31-36_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _11/5/2009_.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

1.   Claims 1-2, 4-11, 13-20, 22-29, 31-36 are presented for examination.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

11/2/2009 has been entered.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-2, 4-11, 13-20, 22-29, 31-36 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Lowell et al., 2005/0091354 (hereafter Lowell) in view of

Adamovits et al., Patent No. 6,698,017 (hereafter Adamovits).

5.   As per claims 1, 10, 19, 28, Lowell teaches an apparatus comprising:

a virtual machine monitor (VMM) implemented in the host execution mode creates original and target protected mode environments to operate guest software in a virtual machine (Para 18, 19: the first OS instance corresponds to the original mode, and the second instance corresponds to the target protected mode);

wherein responsive to a command to switch between the protected modes, the VMM causes the processor to atomically switch between the original protected mode environment and the target protected mode environment (Para 19, 21, 24, 28, 34).

Lowell does not specifically teach a processor having a normal execution mode and a host execution mode; and a virtual machine control structure (VMCS) to store state information for use in switching between the original protected mode environment and the target protected mode environment, the VMCS to store state information related to the original protected mode environment.

However, Adamovits teaches a processor having a normal execution mode and a host execution mode (Column 9, lines 1-10); and a virtual machine control structure (VMCS) to store state information for use in switching between the original protected mode environment and the target protected mode environment, the VMCS to store state information related to the original protected mode environment for the purpose of maintaining execution states during system migration (Column 6, lines 20-25; Column 7, lines 6-13, lines 49-55; Column 11, lines 5-27: the memory location where the provisioning information is stored corresponds to the VMCS).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings of Lowell with the specifics of a processor having a normal execution mode and a host execution mode; and a virtual machine control structure (VMCS) to store state information for use in switching between the original protected mode environment and the target protected mode environment, the VMCS to store state information related to the original protected mode environment, As taught by Adamovits, because it allows the system to maintain execution states during system migration.

6.   As per claims 2, 11, 20, 29, Lowell teaches wherein switching between protected modes further includes entering a virtual machine execution (VMX) mode to enable virtual machine functionality (Para 18).

7.   As per claims 4, 13, 22, 31, Adamovits teaches wherein the virtual machine control structure (VMCS) further stores state information related to the target protected mode environment (Column 11, lines 5-15).

8.   As per claims 5, 14, 23, 32, Lowell teaches wherein the virtual machine control structure (VMCS) further stores a guest entry point field to point to a command used for instructing the processor to exit out of the original protected mode environment and a host entry point field to point to a command to instruct the processor to exit out of a virtual machine execution (VMX) mode (Para 18, 34).

9.   As per claims 6, 15, 24, 33, Lowell teaches wherein the VMM causes the processor to enter a virtual machine execution (VMX) mode, to exit out of the original

protected mode environment, and to enter into the target protected mode environment (Para 18, 34, 46).

10.   As per claim 7, 16, 25, 34, Lowell teaches wherein the VMM causes the target protected mode environment to exit out of the virtual machine (VMX) extension mode (Para 48).

11.   As per claims 8, 17, 26, 35, Lowell teaches wherein the processor resumes operation with the target protected mode environment (Para 47).

12.   As per claims 9, 18, 27, 36, Lowell teaches wherein guest software operable in a protected mode environment includes an operating system (Para 24).

Response to Arguments

13.   Applicant's arguments with respect to claims 1-2, 4-11, 13-20, 22-29, 31-36 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MENGYAO ZHE whose telephone number is (571)272-6946. The examiner can normally be reached on Monday Through Friday, 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/   /Mengyao Zhe/
Supervisory Patent Examiner, Art Unit 2195